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Development and usability of a theory-based text-messaging intervention to support people with hearing loss when they are first prescribed hearing aids

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1. Background

The problem

- 18 million people in the United Kingdom have significant long term hearing loss [1]
- 355,000 adults are fitted with hearing aids each year via the National Health Service (NHS) at a cost of £131 million.
- The non-use and infrequent use of NHS prescribed hearing aids is high.

The solution

florence
Intelligent Health Messaging

- Text-messages are simple, convenient, requiring little effort to engage.
- Florence responds to patients in real time, providing information required to overcome common barriers exactly when they need it.

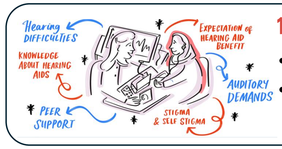
Research aims:

1. To co-create and refine the text-message content with patients and audiologists
2. To pilot the intervention with patients, gather in-depth feedback on the text-message content, language and framing.

The intervention protocol has been:

- designed in accordance with the Medical Research Council guidance for the development and evaluation of complex interventions [2]
- incorporates targeted behaviour change techniques [3] to address key barriers to the use of hearing aids when patients are first prescribed them.

2. Methods

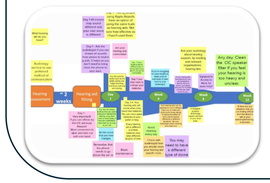


1.Identifying facilitators and barriers

- Examined existing literature
- Explored via semi-structure interviews the experiences, needs and challenges of a range of adults with hearing loss (n=26)

2. Intervention co-development

- 4 co-design workshops with hearing aid users and audiologists to develop text-messages based on a 2-week (pre-hearing aid fitting) protocol and 12-week (post-hearing aid fitting) protocol.
- Draft text-message protocol was reviewed and refined by 3 hearing aid users and 3 audiologists who participated in the workshops.



Participants

Hearing aid users: *n= 5, 3 workshops (2 online, 1 face-to-face); aged between 37-74 years (mean: 61.75)*

Audiologists: *n=6 from across the UK, 1 workshop (online); years of professional experience 3-20 years, (mean: 12.6)*

3. Usability testing

Participants

Hearing aid users: *n=5; aged between 23-66 years (mean: 45.2); prescribed hearing aids between 3 weeks – 6 months ago;* all rated their mobile phone use as "competent".

- Accelerated pilot of Protocols 1 and 2
- Completion of reflective diaries
- Participated in retrospective interviews

3. Results

Stage 1 (pre-hearing aid fitting)

- Sets realistic expectations of the benefits hearing aids can provide.
- Enables the patient to sets goals and action plans to achieve these goals.

Stage 2 (post-hearing aid fitting)

- Provides strategies to help patients manage their hearing loss with hearing aids.
- Monitors goal attainment and hearing aid use.
- Signposts to existing information and additional support.

4. Conclusion

- Florence audiology text-message protocol was co-developed and refined in collaboration with people who use hearing aids and audiologists.
- Florence uses behaviour change techniques to address key barriers to hearing aid use and promote the self-management of hearing loss.
- If effective, result in better use of NHS resources.

References

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